

The Effects of Pursuing the Organic Farming of Onion Product on the Saudi Agricultural Economics

By

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Abstract

This paper aims to measure the effects of pursuing the organic farming of onion product on the Saudi agricultural economics. This has been done by measuring the effects of limiting chemical fertilizers and pesticides and increasing organic fertilizers usage on productivity, farm gate price, production costs, gross and net returns, self-sufficiency ratio, imports value of dry onion, balance of trade deficit and exports coverage rate on imports. To achieve its goals, the study depended on analysis of simulation and regressive models estimated by ordinary least squares (OLS) procedure. The results of study were:

- (1) Application of organic agriculture on dry onion cause the reduction of productivity and increase in product prices because of quality increase. The results showed that a reduction of chemical fertilizers and pesticides by 50% and increase of organic fertilizers by the same rate, results in reduction of productivity by 70.6% and increase of dry onion farm gate price by 119.9%.
- (2) Under situation of no chemical fertilizers and pesticide application and by doubling organic fertilizer amounts, the self-sufficiency in dry onion decreases by 86.5% and hence the amount and value of dry onion imports increase by 19.9% and 22.1% respectively and trade deficit increases by 23% while the export rate of coverage on imports decreases by 27%.
- (3) Despite its effects on Saudi agricultural economics, the application of organic agriculture leads to products quality increases in addition to its positive environmental effects represented in the protection of water, land and human resources, one of the pillars of sustainable development.